

# Extra Practice

# 3.4

Name \_\_\_\_\_

In 1–3, determine whether the given point is a solution of the given equation.

1.  $(1, -1)$ ,  $2x - 3y = 5$

2.  $(0, 2)$ ,  $x + 4y = 8$

3.  $(2, 2)$ ,  $3x - 5y = 16$

In 4–6, determine the value of  $b$  so that the point given is a solution point of the equation.

4.  $(2, 5)$ ,  $3x + 4y = b$

5.  $(3, 0)$ ,  $2x - y = b$

6.  $(-5, 6)$ ,  $3x - 2y = b$

In 7–9, solve the system. Check your solution algebraically and graphically.

7.  $2x + 3y = 3$

8.  $3x - 5y = -11$

9.  $x + 2y = 6$

$x - y = 4$

$2x + y = -3$

$3x + y = 8$

In 10–12, match the system of equations with its graph. Use the graph to describe the solution to the system.

10.  $x + y = 3$

11.  $5x - y = 1$

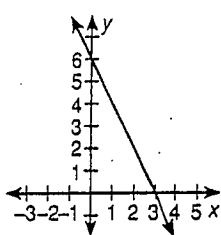
12.  $2x + y = 6$

$2x - y = 0$

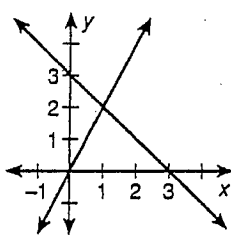
$3x - y = -1$

$x + \frac{1}{2}y = 3$

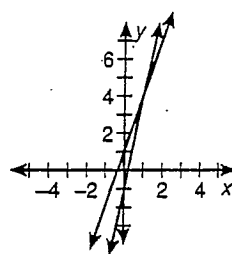
(a)



(b)



(c)



In 13–15, write an equation of the line parallel to the line  $l$  and which passes through the point  $P$ .

13.  $l: y = 2x - 4$

14.  $l: y = -2x - 4$

15.  $l: y = \frac{1}{2}x + 5$

$P(2, 5)$

$P(-1, 0)$

$P(0, 4)$

In 16–18, write an equation of the line perpendicular to the line  $l$  and passes through the point  $P$ .

16.  $l: y = \frac{1}{2}x - 6$

17.  $l: y = -5x$

18.  $l: y = -\frac{1}{4}x + 2$

$P(6, 2)$

$P(5, 2)$

$P(3, 0)$

19. Use the equations of the lines containing the points  $A(0, 4)$ ,  $B(1, 6)$ , and  $C(-4, 6)$  to prove that they are vertices of a right triangle. Identify at which vertex the right angles exist.